IN THE CLAIMS:

1 1. (Previously Presented) A method for programming wireless subscriber

2 terminals in a wireless system, the wireless system having a base station in wireless

3 communication with the wireless subscriber terminals using one or more control channels

4 and multiple traffic channels, and each wireless subscriber terminal having a memory, a

5 non-volatile memory, a processor, and a pre-existing control program running on the

6 processor to control operation of the wireless subscriber terminal, the method comprising

7 the steps of:

8 A. transmitting from the base station over a control channel to wireless sub-scriber

9 terminals information about a new control program;

10 B. transmitting a response from each individual wireless subscriber terminal over a

11 control channel to the base station indicating whether that terminal will be a re-

12 cipient of the new control program;

13 C. broadcasting the new control program in blocks of data from the base station to

14 the recipient terminals over a control channel;

15 D. polling all of the recipient terminals by the base station over a control channel to

16 determine the transfer status of the new control program at each recipient termi-

17 nal;

18 E. transmitting a status message from each recipient terminal to the base station over

19 a point-to-point control channel indicating the status of the reception of the new

20 control program;

21 F. re-transmitting select missing data blocks to each recipient terminal in response to

22 the individual status messages sent from each recipient terminal that indicate an

23 incomplete transmission and the specific data blocks needed; and

24 E. transferring control of each recipient terminal to said new control program.

1   2. (Cancelled)

1   3. (Previously Presented) The method of claim 1, wherein the step of re-transmitting

2   occurs over one or more point-to-point control channels.

1   4. (Previously Presented) The method of claim 1, wherein the step of re-transmitting

2   occurs over one or more broadcast control channels.

1   5. (Cancelled)

1   6. (Previously Presented)   The method of claim 1, wherein the step of transferring

2   control involves performing a series of diagnostic tests at each recipient wireless sub-

3   scriber terminal to determine the validity of the new control program received at that

4   wireless subscriber terminal.

1   7. (Previously Presented) The method of claim 1, further comprising the step of storing

2   each program segment received by the recipient wireless subscriber terminal in the non-

3   volatile memory of the wireless subscriber terminal, whereby the wireless subscriber ter-

4   minal retains all received program segments if reception of program segments by the

5   wireless subscriber terminal is interrupted.

1   8. (Original) The method of claim 1 further comprising the step of storing the original

2   control program in non-volatile memory after transferring control of the processor to the

3   new control program.

1   9. (Previously Presented) The method of claim 1 wherein the pre-existing control pro-

2   gram and the new control program each comprise a software patch for controlling less

3   than all of the operations of the wireless subscriber terminal.

1   10. (Original) The method of claim 1 wherein the wireless subscriber terminal is a cel-

2   lular phone.

1   11. (Original) The method of claim 1 wherein the wireless subscriber terminal is a termi-

2   nal of a wireless local loop.

1   12. (Original) The method of claim 1 wherein the step of transferring control to the new

2   control program is forced by the base station during the step of initializing each wireless

3   sub-scriber terminal.

1   13. (Previously Presented)   A system for programming wireless subscriber terminals,

2   the system comprising:

3   a base station, the base station having a memory;

4   a control program stored in the memory of the base station;

5   one or more wireless subscriber terminals in wireless communication with the

6   base station over an air interface, the air interface comprising a plurality of traffic chan-

7   nels and a plurality of control channels;

8   means for transmitting from the base station to wireless subscriber terminals in-

9   formation about a new control program;

10   means for transmitting a response from each individual wireless subscriber termi-

11   nal over a control channel to the base station indicating whether that terminal will be a

12   recipient of the new control program;

13   means for broadcasting the new control program in blocks of data from the base

14   station to the recipient terminals;

15   means for polling all of the recipient terminals over a control channel to deter-

16   mine the transfer status of the new control program at each recipient terminal;

17   means for transmitting a status message from each recipient terminal to the base

18   station over a control channel indicating the status of the reception of the new control

19   program;

20   means for re-transmitting select missing data blocks to each recipient terminal in

21   response to the individual status messages sent from each recipient terminal indicating an

22   incomplete transmission and the specific data blocks needed; and

23   means for transferring control of each recipient terminal to said new control pro-

24   gram.

1   14. (Original) The system of claim 13, wherein the one or more wireless subscriber ter-

2   minals comprise cellular phone handsets.

1   15. (Original) The system of claim 13, wherein the one or more wireless subscriber ter-

2   minals comprise wireless local loop terminals.

1   16. (Currently Amended) A base station for programming one or more wireless sub-

2   scriber terminals in a wireless system, the base station comprising:

3   a memory;

4   a control program stored in the memory as one or more program segments;

5   a transmitter for transmitting forward messages to wireless subscriber terminals

6   over an air interface, the forward messages including <u>polling inquiries to recipient termi-</u>

7   <u>nals over a control channel about the transfer of a new control program to recipient ter-</u>

8   <u>minals and including</u> [the] one or more program segments stored in the memory that can

9   be selectively transmitted without regard to sequence;

10   a receiver for receiving reverse messages from wireless subscriber terminals over

11   the air interface<u>, including one or more status messages from recipient terminals over a</u>

12   <u>point-to-point control channel including a response from each individual terminal to said</u>

13   <u>base station indicating whether the terminal will be a recipient of the new control pro-</u>

14   <u>gram, and messages indicating the status of the reception of a new control program, or</u>

15   <u>portion thereof;</u> and

16   a processor connected to the memory, the transmitter, and the receiver for con-

17   trolling operation of the base station.

1   17. (Original) The base station of claim 16, the forward messages including broadcast

2   firmware start messages and the reverse messages including broadcast firmware start re-

3   sponse messages.

1   18. (Original) The base station of claim 16, the forward messages including broadcast

2   firmware status request messages and the reverse messages including broadcast firmware

3   status messages.

1   19. (Original) The base station of claim 16, the forward messages including firmware

2   switch-over messages.

1   20. (Previously Presented) A method for operating a base station to program one or more

2   wireless subscriber terminals in a wireless system, the method comprising the steps of:

3   A.   transmitting from the base station to wireless subscriber terminals information

4   about a new control program;

5   B.   receiving a response from each individual wireless subscriber terminal over a

6   control channel to the base station indicating whether that terminal will be a

7   recipient of the new control program;

8   C.   broadcasting the new control program in blocks of data from the base station

9   to the recipient terminals;

10   D.   polling all of the recipient terminals over a control channel to determine the

11   transfer status of the new control program at each recipient terminal;

12   E.   receiving a status message from each recipient terminal to the base station

13   over a control channel indicating the status of the reception of the new control

14   program;

15   F. re-transmitting select missing data blocks to each recipient terminal in re-

16   sponse to the individual status messages sent from each recipient terminal that

17   indicates an incomplete transmission and the specific data blocks needed; and

18   G. transferring control of each said recipient terminal to said new control pro-

19   gram.

1   21. (Cancelled)

1   22. (Original) The method of claim 20, the step of broadcasting further comprising the

2   step of transmitting one or more broadcast firmware block messages over a broadcast

3   channel.

1   23. (Cancelled)

1   24. (Currently Amended) A wireless subscriber terminal for use in a wireless system, the

2   terminal comprising:

3   a memory;

4   a transmitter for transmitting reverse messages from the terminal over an air inter-

5   face including <u>one or more status messages over a point-to-point control channel includ-</u>

6   <u>ing transmitting a response to a base station indicating whether the terminal will be a re-</u>

7   <u>cipient of the new control program and messages indicating the status of the reception of</u>

8   <u>a new control program, or portion thereof including</u> information relating to missing data

9   blocks from a program transfer;

10   a receiver for receiving forward messages from a base station <u>over a control</u>

11 <u>channel,</u> the forward messages including <u>polling inquiries about the transfer of a new</u>

12 <u>control program to the terminal and including messages concerning</u> the one or more pro-

13 gram segments irrespective of their sequence; and

14   a processor connected to the memory, the transmitter, and the receiver for con-

15 trolling the terminal, and for storing the one or more program segments in the memory.

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1 25. (Original) The terminal of claim 24 wherein the forward messages include broadcast

2 firmware start messages and the reverse messages include broadcast firmware start re-

3 sponse messages.

1 26. (Original) The terminal of claim 24 wherein the forward messages include broadcast

2 firmware status request messages and the reverse messages include broadcast firmware

3 status messages.

1 27. (Original) The terminal of claim 24 wherein the forward messages include firmware

2 switch-over messages.

1 28. (Original) The terminal of claim 24 wherein the forward messages including the one

2 or more program segments are broadcast messages.

1 29. (Previously Presented) A method for operating a wireless subscriber terminal in a

2 wireless system to receive a control program, the method comprising the steps of:

3   A. receiving from the base station information about a new control program;

4   B. transmitting a response from each individual wireless subscriber terminal over

5   a control channel to the base station indicating whether that terminal will be a

6   recipient of the new control program;

7   C. receiving the new control program in blocks of data through a broadcast from

8   the base station at the recipient terminals;

9   D. receiving a status request at all of the recipient terminals over a control chan-

10   nel to determine the transfer status of the new control program at each recipi-

11   ent terminal;

12   E. transmitting a status message from each recipient terminal to the base station

13   over a control channel that indicates the status of the reception of the new

14   control program and specific data blocks missing;

15   F. re-receiving select missing data blocks at each recipient terminal from the

16   base station in response to the individual status messages sent from each re-

17   cipient terminal; and

18   G. transferring control of each recipient terminal to said new control program.

1   30. (Cancelled)

1   31. (Previously Presented) The method of claim 29, the step of receiving the new con-

2   trol program further comprising the step of receiving a plurality of firmware block mes-

3   sages over a broadcast channel.

1   32. (Cancelled)

1   33. (Original) The method of claim 29, the step of transferring control further compris-

2   ing the step of receiving a firmware switch-over message.